

SHERISHORINA, S.I.; DAVIDSON, S.B.; MERINA, A.Ye.; BODUNOVA, V.A.; SHAMSHINA, M.F.;  
GAVRILOVA, T.P.

Certain data on the treatment of chronic dysentery in children with  
methylene blue with phthalazole. *Pediatrics*, Moskva no.3:24-26 May-June  
1953.  
(CML 25:1)

1. Professor for Sherishorina; Docent for Davidson; Assistant for Merina;  
Physicians of Children's Home No. 2 for Bodunova, Shamshina, Gavrilova.
2. Of the Department of Microbiology (Head -- Prof. S. I. Sherishorina)  
and the Department of Faculty Pediatrics (Head -- Docent S. B. Davidson)  
of Saratov Medical Institute.

SHERISHORINA, S.I.

Gonococcal bacteriophage and its properties. Zhur.mikrobiol.epid.i immun.  
no.8:49-53 Ag '53. (MLRA 6:11)

1. Kafedra mikrobiologii Saratovskogo meditsinskogo instituta.  
(Bacteriophagy)

SHERISHORINA, S.I., PONOMAREVA, O.I., FREYDMAN, S.L.

Isolation of Leptospira in thick media. Lab.delo 4 no.3:46-47  
My-Je '58 (MIRA 11:5)

1. Iz kafedry mikrobiologii (zav. - prof. S.I. Sherishorina)  
Saratovskogo meditsinskogo instituta.  
(LEPTOSPIRA)

SHERISHORINA, S.I.

Variability of Streptococcus. Trudy Sar. gos. med. inst.  
26:177-182 '59. (MIRA 14:2)

1. Saratovskiy meditsinskiy institut, kafedra mikrobiologii  
(zav. - prof. S.I. Sherishorina).  
(STREPTOCOCCUS)

SHERISHORINA, S.I.; SOLODOVA, T.L.

Variability of micro-organisms under the influence of antibiotics.

Report No. 1: Truŕy Sar. gos. med. inst. 26:192-196 '59.

(MIRA 14:2)

1. Saratovskiy meditsinskiy institut, kafedra mikrobiologii (zav.-  
prof. S.I. Sherishorina).

(STAPHYLOCOCCUS) (PENICILLIN)

SHERISHORINA, S.I.; VOLYNSKIY, B.G.; MOROV, N.N.; FREYDMAN, S.L.; PONOMAREVA,  
O.I.

Furacillin and levomycetin therapy for patients with cystitis.  
Urologiia 26 no.2:27-32 '61. (MIRA 14:3)  
(BLADDER—DISEASES) (OMYCETIN) (FURAN)

ANTONOV, A.M., prof., red.; VOL'KOVICH, M.P., prof., red.;  
ZAKHAROVA, G.N., dots., red.; IVANOV, N.P., dots., red.;  
IGFEE, I.I., prof., red.; FOY, A.M., prof., red.;  
SHAMARIN, P.I., prof., red.; SHERISHORINA, S.I., prof., red.

[Transactions of the First City Conference of Young Scientists, Medical Section] Trudy Pervoy gorodskoy konferentsii molodykh nauchnykh rabotnikov. Meditsinskaya sektiia. Saratov, Saratovskii meditsinskii inst., 1963. 295 p. (MIRA 18:5)

1. Gorodskaya konferentsiya molodykh nauchnykh rabotnikov. Meditsinskaya sektiia. Ist., Saratov.

SHERISHORINA, S.I.; SHUB, G.M.; SHENDEROV, B.A.

Effect of levomycetin and some chemotherapeutic compounds on the  
activity of dehydrogenases in dysentery bacilli. Antibiotiki 9 no.12:  
1066-1070 D '64. (MIRA 18:7)

1. Kafedra mikrobiologii (zav. - prof. S.I.Sherishorina) Saratovskogo  
meditsinskogo instituta.



ACC NR: AP6024449

SOURCE CODE: UR/0016/66/000/007/0140/0141

AUTHOR: Sherishorina, S. I.; Gasanova, Z. M.

ORG: Saratov Medical Institute (Saratovskiy meditsinskiy institut)

TITLE: The effect of furazolidone on the toxigenicity of pyrogenic staphylococcus

SOURCE: Zhurnal mikrobiologii, epidemiologii, i imunobiologii, no. 7, 1966, 140-141

TOPIC TAGS: staphylococcus, furazolidone, toxicology, infective disease, human ailment

ABSTRACT:

The effect of furazolidone on the toxic properties of antibiotic-resistant staphylococcus was investigated by determining the output of hemolytic, necrotic, and lethal toxins in staphylococcus under experimental and control conditions. Furazolidone was used in minimum (bactericidal for a 50 million/1 ml concentration of microbial cells) and maximum (10 µg/1 ml) doses. Following a three-hr incubation of staphylococcus in nutrient media with maximum and minimum furazolidone doses, the cultures were centri-

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UDC: 576.851.252.097.29:615.756.2

ACC NR: AP602449

fused three times and then grown for ten days in a 25% CO<sub>2</sub> atmosphere on Martin's broth, after which the culture fluid was separated from the microbe cells by centrifugation. Hemolysin content was determined by two-hr incubation of a mixture of 5% suspension of 0.1 ml washed rabbit erythrocytes and 1 ml culture fluid diluted to 1:10—1:300. Hemotoxin content was then judged by hemolysis. In the controls (without furazolidone) hemolytic activity was high and the hemolytic titer correlated to a 1:100—1:300 dilution of culture fluid, compared to the experimental group, where hemolysis was absent or the hemolytic titer was significantly lower than in the controls. Necrotoxin content was determined in skin tests on rabbits, injected intracutaneously with 0.1 ml culture fluid and studied after 48—72 hr. The maximum dose, even undiluted, produced no reactions in rabbits, and the minimum dose reduced the necrotic properties of staphylococcus toxins. Lethal dose was judged by mortality among mice injected intraperitoneally with 0.5 ml culture fluid: in the experimental group where no deaths occurred even the minimum dose destroyed the capacity of staphylococci to produce lethal toxins; all the controls died. It was concluded that furazolidone must act favorably

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SHERISHORINA, S.I.; SOLODOVA, T.L.

Variability of micro-organisms under the influence of antibiotics.  
Report No. 1: Truŕy Sar. gos. med. inst. 26:192-196 '59.  
(MIRA 14:2)

1. Saratovskiy meditsinskiy institut, kafedra mikrobiologii (zav.-  
prof. S.I. Sherishorina).  
(STAPHYLOCOCCUS) (PENICILLIN)

GORCHAKOV, Yu. I.; SHERIYEV, V.A.

Finite groups, all noninvariant subgroups of which are  
complemented. Sib. mat. zhur. 6 no.6:1234-1253 H-D '65.  
(M RA 18:12)

AKOPYAN, Y. Kh.; GROSS, Ye. F.; DREYNGOLD, V. I.; NOVIKOV, B. V.; TITOV, R. A.;  
SHERKHMAMETEV, R. I.

"The investigation by the photoconductivity and luminescence method of the exciton states near the edge and in the depth of the fundamental absorption in crystals."

paper submitted for Intl Conf on Physics of Semiconductors, Paris, 19-24 Jul 64.  
Leningrad State Univ.

- 1/2 —

"APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001549120003-6

... in those cases  
... 1943-1945

APPROVED FOR RELEASE: 07/13/2001

CIA-RDP86-00513R001549120003-6"

МАНЧУВА, Н.; ШЕРБОВ, Сн.; САНОВ, Ур.

Coccidiosis in chicks caused by *C. tenella*. Izv Vet inst zaraz  
parazit 9:155-162 '63



SHERKOV, V. I.

*Made* Iodine values of cellulose. V. I. Sherkov and O. A. Dobush  
Zh. prikl. Khim., 1955, 28, 984-989. Experiments with various  
samples of cellulose in aq. NaOH showed that the I value depended  
on oxidation time but more especially on concn. of alkali. Thus  
cellulose (viscose silk) had an I val. of 2.6 in 4% NaOH but of 6.1  
in 16.2% NaOH. The effect of temp. on reaction speed was slight.  
All wet cellulose specimens showed greater I val. wet than dry ones.  
A. L. B.

2

6(1)

SOV/178-58-7-24/24

AUTHOR: Sherkovin, Yu., Major

TITLE: Some Peculiarities of Radio Communications in the US Army  
(Nekotoryye osobennosti radioobmena v armii SShA)

PERIODICAL: Voyenny svyazist, 1958, Nr 7, pp 46 - 48 (USSR)

ABSTRACT: The author explains rules of radio communication in the US Army. He used the information contained in "Tactics and Technique of Infantry", Volume II, 1953. There is 1 American reference.

Card 1/1

TKACHUK, L.I., slesar'; SHERKUNOV, G.S., inzh.

Machine for cutting foamed concrete blocks. Suggested by L.I.  
Tkachuk, G.S.Sherkunov. Rats.i izobr.predl.v stroi. no.14:37-39  
'60. (MIRA 13:6)

1. Stroitel'nyy trest No.42 Chelyabinskogo sovnarkhoza,  
Chelyabinsk.  
(Concrete blocks) (Cutting machines)

11/11/1957  
BOGOSLOVSKIY, Mikhail Alekseyevich, dots., kand.tekhn.nauk; DOMANEVSKIY,  
N.A., kand.tekhn.nauk, retsenzent; SHERALIMOV, A.P., retsenzent;  
MELEKHIN, A.M., retsenzent; VENDOROV, S.L., kand.geograf.nauk, red.;  
MAKRUSHINA, A.N., red.izd-va; SALAZKOV, N.P., tekhn.red.

[Waterways and ports] Vodnye puti i porty. Moskva, Izd-vo  
"Rechnoi transport." Pt.1. [Investigation of waterways] Issledo-  
vaniia vodnykh putei. 1957. 251 p. (MIRA 11:4)  
(Inland navigation) (Hydraulic engineering)

IVANOV, N.Kh.; KALININ, B.S.; LUR'YE, D.A.; LEVONTIN, L.I.; MIROSHNICHENKO, G.K.; SHMYGUL', B.P.; SHERLAIMOV, N.N.; GORSHKOV, A.A., prof., doktor tekhn.nauk, retsenzent; ORLEANSKIY, Ya.P., red.; SOROKA, M.S., red.

[Automatic unit for the production of CO<sub>2</sub>. Collected working drawings] Avtomaticheskaya ustanovka dlia proizvodstva CO<sub>2</sub>; sbornik rabochikh chertezhei. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 8 p. (MIRA 13:8)

1. Chlen-korrespondent AN USSR (for Gorshkov).  
(Carbon dioxide) (Mechanical drawing)

TABLE I BOOK REFERENCES 607/445

Zverev, B. B., B. S. Kalinin, D. A. Larin, L. I. Lomov, G. K. Mironov, B. P. Shchegolev, and V. N. Shchegolev. Artemicheskaya ustroystva dlya proizvodstva CO<sub>2</sub> izobit robenish chesadny (Artemicheskaya ustroystva dlya proizvodstva CO<sub>2</sub> izobit robenish chesadny) Moscow, Nauka, 1980. 300 pages, 3,000 copies printed.

Barinov, A. A. Corresponding Member, Academy of Sciences USSR, Doctor of Technical Sciences, Professor, Chief of the (Southern Division, Nauka); V. K. Serdyuk, Engineer, Ed. (last book); M. S. Sorokina, Ed. (title page); L. P. Orlovskiy.

REMARKS: This book is intended for technical personnel in foundry shops.

CONTENTS: The book contains 65 drawings of an automatic installation for the production of carbon dioxide. A brief description is also given of scale methods of CO<sub>2</sub> production for general industrial uses and for the food industry. The installation was exhibited at the All-Union Industrial Exposition in 1980. No personalities are mentioned. There are no references.

TABLE OF CONTENTS: None given. The book is divided as follows:

Foreword	3
Modern Methods of CO <sub>2</sub> Production	4
Principle of Operation of the Automatic Installation for the Production of CO <sub>2</sub>	7
Calculations for the Installation	7
Automatic Control Scheme	8
Basic Assemblies of the Automatic Installation	9
1. Mixer	9
2. Reactor	10
3. Water proportioning device	10
End of Book	10

0.37

001-10-54-11-10/41

AUTHORS: Berlin, A. A., Matveyeva, N. G., Sherle, A. I.

TITLE: Letters to the Editor

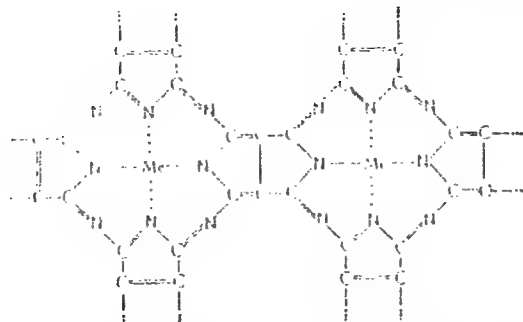
PERIODICAL: Izv estiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk 1959, Nr 12, p 2261 (USSR)

ABSTRACT: Reaction of 1 mole of copper salt of acetylacetone with 2 moles of tetracyanoethylene under vacuum, at 100-300°, proceeded with formation of a complex polymer and separation of acetylacetone. The polymer (infusible black substance) was insoluble in organic solvents, in bases and diluted acids. IR absorption spectrum showed no intense absorption bands in the 700-3,000  $\text{cm}^{-1}$  range, with the exception of a 2,884  $\text{cm}^{-1}$  band corresponding to the CH-group. The following structure of the chelate was suggested:

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Letters to the Editor

207/59-14-1/43



Elemental analysis showed the presence of acetylacetonate groups. Electron paramagnetic resonance spectrum showed broad intense lines with 500-700 oersted separation between peaks. An equimolar mixture of copper salt of acetylacetonate, tetracyanoethylene, and fluoronitrile gave a copolymeric chelate with a presumably ladderlike structure.

Card 2/3



Letters to the Editor

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SOV/62-59-12-43/43

ASSOCIATION: Anisotropic Structures Laboratory, Academy of Sciences,  
USSR (Laboratoriya anizotropicheskikh struktur Akademii  
nauk SSSR)

SUBMITTED: June 5, 1959

Card 3/3

20361

S/02 0/61/136/005/022/032  
B101/E206

15 114 1164, 1143, 1143

AUTHORS: Berlin, A. A., Boguslavskiy, L. I., Burshteyn, R. Kh.,  
Matveyeva, N. G., Sherle, A. I., and Shurmovskaya, N. A.

TITLE: Some electrophysical properties of polymer complexes of  
tetraethylene cyanide with metals

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 5, 1961, 1127-1129

TEXT: The authors deal with the chelate compounds between tetraethylene cyanide and metals. The infusibility and insolubility of these compounds led to the proposal that coatings and plastics be manufactured from them (Ref. 3). The electrophysical properties of polymeric chelate films chemically bonded to metals, which were obtained by treatment of copper, iron, and nickel sheets with tetraethylene-cyanide vapor, were studied in this paper. The degreased and, in some cases, also electropolished or etched metal foils were exposed to tetraethylene-cyanide vapor at  $10^{-5}$  mm Hg and 150 to 400°C. A film firmly sticking to the metal developed, the thickness of which was calculated from the specific gravity of the

Card 1/4

20361

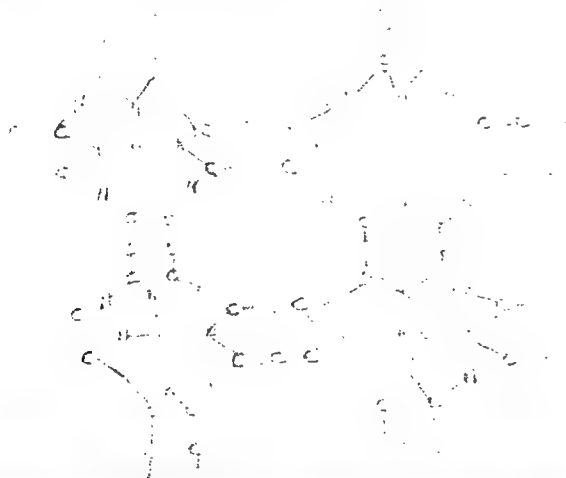
S/020/61/136/005/027/032

B101/B206

Some electrophysical properties ...

polymer and from the weight of the film as being  $5 \cdot 10^{-6}$  -  $3 \cdot 10^{-5}$  cm.

(Owing to the poor combustibility of the chelate film, microanalysis produced too low carbon values). The infrared spectra of the copper complex taken by Yu. Sh. Moshkovskiy and N. D. Kostrova, showed the complete absence of maxima in the range  $800 - 2300 \text{ cm}^{-1}$ . A "parquet" structure of the polymer according to the structural formula



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S/020/61/136/005/722/032  
#101/B206

Some electrophysical properties ...

is concluded therefrom. The electrophysical properties of the films were checked by means of alternating current of 200 cps - 0.2 Mc/sec. The metal covered by the film was immersed in mercury so that the film formed the dielectric of a capacitor, the plates of which consisted of the metal and of mercury. Measurements were made at  $10^{-5}$  mm Hg because the presence of air influenced the results. This effect needs further research. The specific conductivity  $\sigma$ , the film capacitance and its temperature dependence, duration of heating, and the method of metal-surface treatment were determined. The following data are given for films of iron obtained after 3 hr heating at 250°C in tetraethylene-cyanide vapor: film thickness

$3 \cdot 10^{-6}$  cm;  $\sigma = 3 \cdot 10^{-9}$  ohm $^{-1}$  · cm $^{-1}$ , effective dielectric constant  $\epsilon$  (at 3000 cps) = 7. After further 3 hr of heating,  $\epsilon$  increased to

$3 \cdot 10^{-8}$  ohm $^{-1}$  · cm $^{-1}$ , and to 36. Increase of temperature from 250 to 450°C. and heating for 10 hr produced the following values:

$\sigma = 5 \cdot 10^{-8}$  -  $5 \cdot 10^{-6}$  ohm $^{-1}$  · cm $^{-1}$ ,  $\epsilon = 70$ . The sign of the emf indicates that the film possesses p-type conductivity.  $\log \sigma = f(10^3/T)$  is represented in Fig. 2. Measurements between -40 and +220°C yielded two linear sections.  
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S/020/61-136/005/027032

B101/B206

Some electrophysical properties ...

The first lies between -40 and +30°C and corresponds to an activation energy of from 0.07 to 0.12 eV, while the second (30 to 250°C) corresponds to an activation energy of from 0.21 to 0.28 eV. The function represented is similar to that obtained for semiconductors with impurity conductivity. R and C as functions of the logarithm of the frequency between 400 cps and 0.2 Mc/sec were also measured. Results are shown in Fig. 3. It is noted that R and the film capacitance decrease with increasing voltage when a constant voltage is applied. When a direct current is conducted through an alcoholic solution of copper sulfate, metallic copper firmly adhering to the film is deposited on the polymer film formed on iron. The high values indicate that the polarization of conductive macromolecules could be in question. The authors are preparing a study on the complex dielectric constant at higher frequencies. There are 4 figures and 3 Soviet-bloc references.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences USSR). Institut elektrokhimii nauk SSSR (Institute of Electrochemistry, Academy of Sciences USSR)

Card 4/4

S/190/62/004/006/012/026  
B110/B138

AUTHORS: Berlin, A. A., Matveyeva, N. G., Sherle, A. I.,  
Kostrova, N. D.

TITLE: Polymers with conjugate bonds and heteroatoms in the conjugate chains. XXI. Polymeric complexes of tetraethylene cyanide

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 6, 1962, 860-868

TEXT: The preparation of polymers from tetraethylene cyanide and metals or metal salts was studied because: (1) tetraethylene cyanide has a planar structure, which permits conjugation via nitrile groups; (2) it shows four nitrile groups on two carbon atoms, and may form cyclic structures with and without metal atoms; (3) polymers obtained from it and the metals have so far been the only "inorganic" macromolecular compounds with directly bonded carbon, nitrogen and metals; and (4) because of the high vapor tension and heat stability of the monomer polymer complexes can be formed directly on the metal surface (Cu, Fe, Ni, Al etc). Black films which were insoluble in organic, alkaline, and

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S/190/62/004/006/012/026  
B110/B138

Polymers with conjugate bonds...

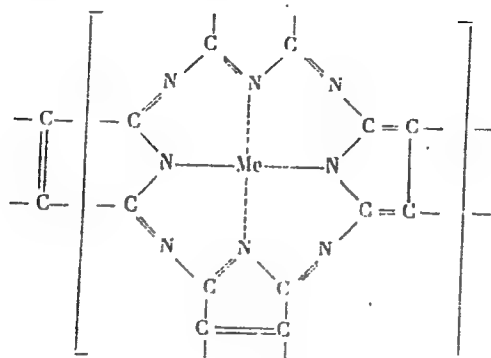
acidic substances were obtained here after 5 - 20 hr at 150 - 450°C. The black, infusible, hygroscopic polymers obtained from tetraethylene cyanide and copper acetylacetonate (2:1) were insoluble in common organic substances, variously soluble in dimethyl formamide, pyridine, triethanolamine and concentrated  $H_2SO_4$ . The IR spectra of the films obtained from

tetraethylene cyanide and copper showed a background at 700 - 1800  $cm^{-1}$  which is typical for built-up or planar polymers with conjugate bonds. Polymers from copper acetylacetonate showed a wide asymmetric absorption band at 1700 - 1400  $cm^{-1}$ . For all polymers the absorption maximum lies at ~2210  $cm^{-1}$ , which corresponded to the  $C\equiv N$  bond. The intensive background confirmed the strongly branched system of the conjugate bonds. The degree of order depends on conditions of synthesis. Polymers obtained from copper acetylacetonate showed abnormal  $\eta/c$  dependence on c, similar to polyphenylenes and polyazophenylenes. The presence of neighboring  $C\equiv N$  groups points to the formation of energetically favorable, flat azophor-phin structures with or without chelate-like bonded metals:

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Polymers with conjugate bonds...

S/190/62/004/006/012/026  
B110/B138



Polymers obtained from metals had much higher heat stability than those obtained from copper acetylacetonate, since the acetylacetonate groups bonded to a metal of different valences initiate chain decomposition into peroxide radicals. The magnetic susceptibility depends on the flux density and temperature, and is higher ( $\chi = 1.03 \cdot 10^{-5}$  CGSM) (200C, 3500

Card 3/4



Polymers with conjugate bonds...

S/190/62/004/005/012/026  
B110/B138

oersted) for a polymer obtained from acetylacetonate in absence of the solvent than for one obtained in the presence of cyclohexanone. The dependence of  $\log \rho$  on  $1/T$  is linear for all polymers. The conductivities are  $10^{-9}$  to  $10^{-12} \text{ ohm}^{-1} \cdot \text{cm}^{-1}$ , the activation energy  $E = 10 - 15 \text{ kcal/mole}$ . There are 5 figures and 4 tables. /

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR)

SUBMITTED: April 8, 1961

Card 4/4

LEVINA, S.D.; LOBANOVA, K.P.; BERLIN, A.A.; SHERLE, A.I.

Electric properties of the systems consisting of tetracyanoethylene  
and metal powders. Dokl.AN SSSR 145 no.3:602-604 JI '62.

(MIRA 15:7)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom  
A.N.Frumkinym.

(Ethylene)

(Metals)

BERLIN, A.A. (Moskva); MATVEJEVA, N.G. [Matveyeva, N.G.] (Moskva);  
CERKASINA, L.G. [Cherkashina, L.G.] (Moskva); SERLE, A.I.  
[Sherle, A.I.] (Moskva).

Synthesis of polymers with heteroatoms and atoms of metals  
in a molecular chain and some of their properties. Chem prum  
13 no.11:601-605 N°63.

ACCESSION NR: AP4041172

S/0062/64/000/006/1132/1132

AUTHOR: Sherle, A. I.; Aseyev, Yu. G.; Frankevich, Ye. L.; Berlin, A. A.; Kasatochkin, V. I.

TITLE: Formation of a tetracyanoethylene chelate polymer

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 6, 1964, 1132

TOPIC TAGS: tetracyanoethylene, organic semiconductor, semiconducting polymer, chelate polymer, copper tetraacetylenide

ABSTRACT: Copper tetraacetylenide (I) has been prepared, identified, and its semiconducting properties studied. Salt I was obtained in acetonitrile and with lower yield in nitrobenzene. Identification was made by elemental analysis and UV and IR spectroscopy. At below 100C, electrical conductivity ( $\delta$ ) in vacuum was described by

$$\delta = 10^{-0.6} \exp(-5670/RT), \delta_{300K} = 10^{-4.7} \text{ ohm}^{-1} \text{ cm}^{-1}.$$

At higher temperatures  $\delta$  drops irreversibly and after heating to 150C becomes  $\delta = 10^{0.8} \exp(11900/RT), \delta_{300K} = 10^{-7.8} \text{ ohm}^{-1} \text{ cm}^{-1}.$

Card 1/2

ACCESSION NR: AP4041172

If I is heated in the presence of tetracyanoethylene a new compound (II) is formed which unlike I is insoluble in acetonitrile and tetrahydrofuron. Compound II is highly soluble in  $H_2SO_4$  and can be precipitated from it with water. IR spectroscopy suggests that II is a chelate polymer. The work was carried out at the Institute of Chemical Physics of the Academy of Sciences USSR.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR  
(Institute of Chemical Physics, Academy of Sciences SSSR)

SUBMITTED: 24Mar64

ENCL: 00

SUB CODE: OC, SS

NO REF SOV: 001

OTHER: 001

ATD PRESS: 3043

Cord 2/2

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(111A 17:11)

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L 24184-65 ENT(m)/EPF(c)/ENP(j)/T Pc-4/Pr-4 RPL RM

ACCESSION NR: AP5003830

S/0190/65/007/001/0088/0093

AUTHOR: Berlin, A. A.; Sherle, A. I.; Belova, G. V.; Boreyev, O. M.

TITLE: Synthesis and investigation of polymeric complexes formed in the reaction of tetracyanoethylene with powdered metals B

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 1, 1965, 88-93

TOPIC TAGS: coordination polymer, polytetracyanoethylene, tetracyanoethylene

ABSTRACT: Communication 58 of the series "Polymers with a Conjugated System" reports the preparation of copper, iron, and magnesium tetracyanoethylene (TCE) coordination polymers and metal-free polytetracyanoethylene. They were made by reacting TCE with copper, iron, magnesium, or bronze in a 2/1 molar ratio in nitrobenzene in a stream of argon at 210C for 10 hr. All the coordination polymers obtained were infusible black powders, insoluble in the common organic solvents but soluble in concd  $H_2SO_4$ . The copper-containing polymer was stable in  $H_2SO_4$ , but the magnesium-containing polymer lost the metal to form

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L 24184-65

ACCESSION NR: AP5003830

a metal-free polytetracyanoethylene which behaves like polymerization-prepared polytetracyanoethylene. Thermal-oxidative degradation curves were typical of conjugated polymers. A porphyrasine structure was assigned to the polymers. Orig. art. has: 3 figures, 1 table, and 3 formulas.

(SH)

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 11Mar64

ENCL: 00

SUB CODES: OC, GC

NO REF SOV: 006

OTHER: 003

ATD PRESS: 3175

Card 2/2



POGOREL'KIY, V.I.; LEBEDEV, A.I.; BELYAN, A.A.

Electrophysical properties of films of polymeric complexes  
of tetracyanoethylene with a metal. Zhur. fiz. khim. 38  
no.5/1118-1125 My '64. (MIRA 18:12)

1. Institut elektrokhimii AN USSR i Institut khimicheskoy fiziki  
AN SSSR. Submitted March 18, 1963.

СВЕТЛО

Singl. spent pouring of cast iron and slag. Metallurg 10 no.4:  
6.7 Ap '65. (MIRA 18:7)

1. kommunarskiy metallurgicheskiy zavod.

AVILYOV, V.I.; Shchad, D.P.

Two suggestions for plants manufacturing compressors.

Mashinostroitel' no. 2:46 of '61.

(MIA 14:1)

(Compressors--Technological innovations)

DRYAPIK, Ye.P.; ZHILIN, L.P., inzh.; SHERLE, D.P., inzh.

Reorganization of the ~~Kommunar~~ Metallurgical Plant. Stal' 22  
no.10:865-£70 0'62. (MIRA 15:10)

1. Glavnyy inzh. Kommunarского metallurgicheskogo zavoda (for  
Dryapik).

(Kommunar (Donetsk Province)—Iron and steel plants)

SHERLE, D. P., inzh.

Seminar on the study of progressive practices in the making  
of ferromanganese. Met. i gornorud. prom. no.1:80-81 Ja-F '63.  
(MIRA 16:4)

1. KommunarSKIY metallurgicheskiy zavod.

(Ferromanganese—Metallurgy)

SHERIE, Z.P.

Constructive initiative on the part of Gorkiy harbor efficiency  
promoters and inventors. Rech. transp. 16 no.6:4-5 Je '57.  
(MLRA 10:8)

1. Glavnyy inzhener Gor'kovskogo porta.  
(Gorkiy--Harbors) (Loading and unloading)

SHERIE, Z.

Mechanization of loading and unloading operations at the Gorkiy  
docks. Rech. transp. 19 no. 2:15 F '60. (MIRA 14:5)

1. Glavnyy inzh.Gor'kovskogo porta.  
(Gorkiy Harbor—Cargo handling) (Cranes, derricks, etc.)

SHERLE, Z.

Improve the design of floating cranes. Rech.transp. 19 no.9:  
40 S '60. (MIRA 13:9)

1. Glavnyy inzhener Gor'kovskogo porta.  
(Floating cranes)



SHERLE, Z., dotsent; ZAKHARTSEV, V., inzh.; GLADSHEV, A., inzh.

Transportation of phosphate meal. Pech. transp. 24 no.7:  
16-18 '65. (MIRA 18.8)

I. Gor'kovskiy Institut inzhenerov vodnogo transporta (for  
Gladyshev).

SHERLE, Z.

New machines for operation in holds. Rech.transp. 21 no.7:48-49  
Jl '62. (MIRA 15:8)

1. Glavnyy inzh. Gor'kovskogo porta.  
(Cargo handling--Equipment and supplies)

NYURKIN, I., inzh.; SHERLE, Z., inzh.

"Harbor and deck load-hoisting machinery" by A.I. Dukel'skii.  
Reviewed by I. Niurkin, Z. Sherle. Rech. transp. 21  
no.12:55-56 D '62. (MIRA 15:12)

(Cranes, derricks, etc.)

(Deck machinery)

(Dukel'skii, A.I.)

1. Title: Soils  
2. Author: General Problems  
3. Date: 1970, No. 1, 1971

4. No.: Shulin L.  
5. Title: Not given  
6. Subject: Forest Shelter belts for Reclaiming Field  
7. Location: Belarus

8. Date: 1970, No. 1, 1971, No. 2, 1972, No. 3, 1973

9. Summary: Methods and experiment station experience shows that in the steppe areas the grain yields from sheltered fields are higher by 11-6 cwt/ha than on the open fields. The greatest yield increase is found in the direct vicinity of the forest strip up to a distance of 50 m from it. Therefore, narrow strips (1-6 rows) should be placed not far from each other. Wider strips (10-12 rows) should be used where danger from wind erosion

10. Ref: 1/3

the forest he seldom grows up to 50 cm. The  
percentage of forest not in cultivation between  
1960 and 1971 is 20%.

SHERMAN, L.

Diagnostic significance of the activity of aldolase in the cerebrospinal fluid in acute neuroinfections. Zhur. nevr. i. psikh. 65 no.3:371-375 '65. (MIRA 15:4)

1. Meningitnoye otdeleniye Gorodskoy infektsionnoy bol'nitsy (glavnyy vrach Ye.K. Zhelandovskaya), Tallin.

ZEYDE, O.A.; SHERLIN, S.M.; BRUKER, A.B.

Interaction of n-halophenylhydrazines with arsenic acid. Zhur.ob.  
khim. 28 no.9:2404-2407 S '58. (MIRA 11:11)  
(Arsenic acid) (Hydrazine)





SYROVATKIN, A.; SHERMAN, A.; GOLOMAN, S., red.; MUKHANOV, F., red.

[Work practices of the "Saratovtselinstroi" Trust in the industrialization of rural construction] Opyt raboty tresta "Saratovtselinstroi" po industrializatsii sel'skogo stroitel'stva. Moskva, Trest "Orgsovkhozstroi", 1963. 14 p.

(MIRA 17:4)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye po delam sel'skogo i kolkhoznogo stroitel'stva. 2. Nachal'nik otdela tresta "Orgsovkhozstroy" (for Syrovatkin). 3. Glavnyy tekhnolog tresta "Saratovtselinstroy" (for Sherman).

ACC NR: AP6033557

SOURCE CODE: UR/0181/66/008/010/2965/2969

AUTHOR: Smolenskiy, G. A.; Yudin, V. M.; Syrnikov, P. P.; Sherman, A. B.

ORG: Institute of Semiconductors, AN SSSR, Leningrad (Institut poluprovodnikov AN SSSR)

TITLE: The transparent hexagonal ferrimagnet  $\text{RbNiF}_3$

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2965-2969

TOPIC TAGS: rubidium compound, magnetic property, magnetic susceptibility, magnetic anisotropy, Curie point, magnetic structure

ABSTRACT: The purpose of the investigation was to study the magnetic properties of single-crystal  $\text{RbNiF}_3$ , both above and below the magnetic-transition temperature, in view of the fact that they were hitherto investigated only in the paramagnetic region in single-crystal form. Transparent  $\text{RbNiF}_3$  crystals with low dielectric losses can be of interest for modulation of light beams in microwave devices at low temperatures. The single crystals were obtained by exchange decomposition at high temperatures. The magnetic properties were investigated with a magnetic balance by the Faraday method in fields from 2 - 14 kOe. The apparatus was described earlier (FTT v. 6, 3668, 1964) and was modified to accommodate anisotropic crystals. The reciprocal magnetic susceptibility was measured as a function of the temperature and the magnetic-moment components were determined as functions of the field intensity at different temperatures. The results confirm that  $\text{RbNiF}_3$  is a ferrimagnet of the ferroplan type with a Curie

Card 1/2

ACC NR: AP6033557

temperature of 145K. The magnetic structure and the magnetic anisotropy of  $\text{RbNiF}_3$  exhibit a complicated variation which can be interpreted from the point of view of the assumption that as the temperature is increased the magnetic structure changes from one with an easy-magnetization plan to one having a cone of easy-magnetization directions. Orig. art. has: 6 figures and 5 formulas.

SUB CODE: 20/ SUBM DATE: 03Mar66/ ORIG REF: 002/ OTH REF: 005

Card 2/2

L 26063-66

ACC NR: AP6015808

form characteristic of ferrimagnets. The magnetic ordering sets in at 145K. Plots were obtained of the magnetic moment at 77K against the field intensity and against the temperature in the direction along the hexagonal axis and perpendicular to it. From these plots it is possible to estimate the field of negative uniaxial anisotropy at 77K ( $\sim 25$  koe) and the sum of the magnetic anisotropy constants ( $K_1 + K_2 \approx -0.4 \times 10^6$  erg/cm<sup>3</sup>). The results are interpreted from the point of view of the collinear model of ferrimagnetism. The value obtained on this basis for the specific magnetization is 18 G-cm<sup>3</sup>/deg. Although the obtained value of the saturation magnetization per formula unit at 0°K is found to be somewhat lower than the theoretical value ( $\sim 2/3$  Bohr magnetons), the difference is attributed to the high temperature of the experiment (more than half the Curie temperature). The results show that on approaching the Curie point the anisotropy constants decrease rapidly, and this gives rise to a spontaneous magnetic moment. It is concluded on the basis of all the data that RbNiF<sub>3</sub> is a transparent ferrimagnet of the ferroplan type. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 25Mar66/ ORIG REF: 001/ OTH REF: 003

Card 2/2 .cc

S/128/60/000/010/008/016/XX  
A033/A133

AUTHORS: Gel'perin, N. V.; Zvolinskaya, V. V.; Parfenov, V. S., and  
Sherman, A. D.

TITLE: Technological process of casting crankshafts for the  $\Delta 8-30$   
(DV-30) engine at the Vladimirovskiy traktorny zavod (Vladimirov Tractor Plant)

PERIODICAL: Liteynoye proizvodstvo, no. 10, 1960, 16 - 17

TEXT: Based on the experience of the Khar'kov "Serp i molot" Plant, the Vladimirov Tractor Plant started the casting of crankshafts for the DV-30 engine. The authors enumerate the deficiencies occurring during the casting of the crankshaft for the  $\Delta 8-30$  (SMD-7) engine at the "Serp i molot" Plant and point out that the elimination of black spots by increasing the machining tolerances is not expedient; therefore, it is necessary to prevent the origination of black spots which can be attained by the desulfurization of the cast iron, bringing the S-content down to 0.008 - 0.005%. This is possible if the cast iron is smelted in a basic electric furnace. Attempts were made to eliminate the technical difficulties connected with the

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S/128/60/000/010/008/016/XX

Technological process of casting crankshafts... AO33/A133

production of magnesium-modified cast iron by using other modifiers, like cerium, tellurium, calcium, strontium, lithium, etc. Tests proved cerium and foundry alloys on the base of cerium to be the most suitable modifiers. In comparison with magnesium, cerium offers the following advantages: no metal ejection during modification; the assimilability of cerium amounts to not less than 30%; lower sensitivity of the cast iron to demodifiers; insignificant cast iron temperature drop during the modification process (between 20 and 40°C); uniform distribution of sulfur over the casting and absence of black spots on its surface. In order to maintain a constant chemical cast iron composition during the investigations basic cast iron of the following chemical composition (in %) was smelted in a 3-ton acid electric furnace: 3.5 - 3.8 C; 2.0 - 2.2 Si; 0.8 - 1.0 Mn; not more than 0.04 S. Then this cast iron was remelted in a 50-kg capacity acid induction furnace. The metal was heated to 1,480 - 1,450°C, the modifiers (composition: 5 - 7% Mg, 10% Fe, 40 - 50% Ce, the rest rare earths) amounting to 0.4 - 0.35% of the liquid metal weight was put on the ladle bottom. To remove cementite formations and increase the mechanical properties, the cast iron was subjected to additional modification by 0.3 - 0.4% C<sub>W</sub> (Si) 75 ferrosilicium. After two minutes holding in the ladle the metal was poured into the crankshaft

Card 2/3

LAKEDIMONSKIY, A.V., kand.tekhn.nauk; PLENTSOV, G.I., kand.tekhn.nauk;  
SHERMAN, A.D.; ABRAMENKO, Yu.Ye.

Characteristics of the wear of cylinders of motor-vehicle engines.  
(MIRA 18:5)  
Avt.prom. 31 no.4:14-17 Ap '65.

1. Moskovskiy avtozavod imeni Likhacheva.

ZAKIN, M.M.; ZUDINA, M.A.; TUMASOVA, G.M.; FEL'MAN, A.N.; SHERMAN, A.Sh.

Clinical and epidemiological characteristics of bacillus carriers  
[with summary in French]. Probl.tub. 35 no.4:10-16 '57. (MLRA 10:8)

1. Iz protivotuberkuleznogo dispansera No.11 Shcherbakovskogo rayona  
Moskvy (glavnyy vrach G.V.Kotsubey, zam. glavnogo vracha po medi-  
tsinskoy chasti M.M.Zakin)

(TUBERCULOSIS

carriers, clin. & epidemiol. characteristics (Rus))



SHERMAN, A.Sh.

Differential diagnosis of sarcoidosis and tuberculosis [with summary in French]. Probl.tub. 36 no.3:92-93 '58 (MIRA 11:5)

1. Iz protivotuberkuleznogo dispansera No.11 Shcherbakovskogo rayona Moskvy (glavnyy vrach G.V. Kotsubey, zam. glavnogo vracha po meditsinskoy chasti M.M. Zakin).

(SARCOIDOSIS, differ.diag.

pulm.,from pulm. tuberc. (Rus))

(TUBERCULOSIS, PULMONARY, differ. diag.

pulm. sarcoidosis (Rus))

SHERMAN, A.Sh. (Moskva)

Causes of the development of chronic fibrous-cavernous pulmonary tuberculosis. Klin.med. 37 no.12:82-88 D '59. (MIRA 13:4)

1. Iz protivotuberkuleznogo dispansera No.11 Moskvy (glavnyy vrach T.V. Kotsubey).  
(TUBERCULOSIS)

SHERMAN, A.Sh. (Moskva)

Clinical and radiographic characteristics of patients with  
chronic fibrocavernous tuberculosis. Kaz.med.zhur. 40  
no.3:82-83 My-Je '59. (MIRA 12:11)  
(TUBERCULOSIS)

SHERMAN, A.Sh. (Moskva)

Some problems in the epidemiology of chronic fibrous-cavernous  
pulmonary tuberculosis. Kaz. med. zhur. no.6:83-84 N-D '60.  
(TUBERCULOSIS)

SMULEVICH, V.B.; SHERMAN, A.Sh.

Experience in bronchography in an antituberculosis clinic.  
Probl.tub. 39 no.2:98-100 '61. (MIRA 14:3)

1. Iz kafedry tuberkuleza (zav. - prof. A.Ye. Rabukhin) Tsentral'-  
nogo instituta usovershenstvovaniya vrachey (dir. V.P. Lebedeva)  
i protivotuberkuleznogo dispansera No.11 (glavnyy vrach G.V.  
Kotsubey, zamestitel' po meditsinskoy chasti M.M. Zakin)  
(TUBERCULOSIS) (BRONCHI--RADIOGRAPHY)

SHERMAN, A. Sh.

Tuberculosis incidence among persons coming in contact with  
patients expectorating Mycobacterium tuberculosis resistant  
to drugs. Probl. tuberk. 41 no.4:3-6 '63 (MIRA 17:2)

1. Iz protivotuberkuleznogo dispansera No.11, Moskva.

BULANOVA, S.I.; SMULEVICH, V.B.; SHERMAN, A.Sh.

Role of a dispensary for tuberculosis control in the detection of lung cancer. Vop. onk. 11 no.3:85-89 '65.

(MIRA 18:6)

1. Iz protivotuberkuleznogo dispansera No.11 Moskvy (glavnyy vrach - kand. med. nauk A.Sh. Sherman) i l-go khirurgicheskogo otdeleniya (zav. - doktor med. nauk B.Ye. Peterson) Instituta eksperimental'noy i klinicheskoy onkologii AMN SSSR (dir. - deystvitel'nyy chlen AMN SSSR prof. N.N. Blokhin).

BABELYAN, V.B.; VINNICHENKO, N.G., kand. ekon. nauk; GNEDASH, G.N.;  
GRIGOR'YEV, A.N.; DANILOV, N.K.; IVANOV, A.P.; IVLIYEV, Ivan  
Vasil'yevich; POTAFOV, I.A.; TRUB'KHIN, M.G., kand.ekon. nauk;  
TUKHOVITSKAYA, L.K., inzh.; TYVALCHUK, D.P., inzh.; SHERMAN,  
A.Ya.; SHCHERBAKOV, P.D., inzh.; EVENTOV, G.S.; KRISHTAL', L.I.,  
red.; MAKUNI, Ye.V., tekhn. red.

[Financing in railway transportation; manual] Finansirovanie na  
zheleznodorozhnom transporte; spravochnik. Pod obshchei red. I.V.  
Ivlieva. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-ya  
putei soobshcheniia, 1962. 422 p. (MIRA 15:4)  
(Railroads--Finance)



AL SHERMAN, A.

PROCESSING AND PROPERTY INDEX

•Methods for Testing the Porosity of Tin Films. M. I. Zibel'farb and B. A. Sherman (Zavod. Lab., 1045, 11, 1110-1121; C. Ab., 1949, 40, 7138) [In Russian] The porosity of tin films was best determined by anodic treatment in solutions containing potassium ferricyanide (10 g. l.), sodium sulphate (10 g. l.), and sodium chloride. The duration of the electrolysis was 3 min. and the initial c.d. 0.5-0.8 amp./dm.<sup>2</sup>. A passive film was formed on the anode during the electrolysis and the c.d. decreased. The pores appeared as red spots. The test did not result in an appreciable destruction of the tin film. The change in weight of the sample did not exceed  $\pm 0.004$  g. in samples weighing 3-5 g.

ASAC 114 METALLURGICAL LITERATURE CLASSIFICATION

11-30- 11-11-30

11-11-30 11-11-30

CA

**Methods for testing the porosity of tin films.** M. I. Zolotarev and B. A. Sherman. *Zashchita Met.* 11, 419-21 (1945). Porosity of tin films was best detected by anodic treatment in solns. contg.  $K_2Cr(CN)_{14}$  (10 g./l.),  $Na_2SO_4$  (10 g./l.), and NaCl. The duration of the electrolysis was 5 min. and the initial c. d. 0.5-0.6 amp./sq. dm. A passive film was formed on the anode during the electrolysis and the c. d. decreased. The pores appeared as dried-brown spots. The test did not result in an appreciable destruction of the Sn film. The change in wt. of the sample did not exceed 0.004 g. in samples weighing from 3 to 5 g. Seven references.

DETAILS OF LITERATURE CLASSIFICATION

SHERMAN, B.P.

BEREGOVSKIY, V.Ye.; VASILENKO, M.I.; VELIER, R.L.; VERBLOVSKIY, A.M.;  
VERNER, B.F.; VOYDALOVSKAYA, Ye.N.; VOL'SKIY, A.N.; GLAZKOVSKIY, A.A.;  
GRANOVSKIY, B.L.; GREYVER, N.S.; GUDIMA, N.V.; DOLGOPOLOVA, V.I.;  
KARCHEVSKIY, V.A.; KOVACHEVA, Ye.B.; KUDRYAVTSEV, P.S.; LEBEDEV, A.K.;  
LISOVSKIY, D.I.; LIKHNITSKAYA, Z.P.; MATVEYEV, N.I.; MEL'NITSKIY, A.N.;  
MIRONOV, A.A.; MIKHAYEVA, A.A.; MURACH, N.N.; OKUN', A.B.; OL'KHOV, N.P.;  
OSIPOVA, T.B.; PAVLOV, V.P.; ROTINYAN, A.L.; SAZHIN, N.P.; SEVRYUKOV, N.N.;  
SIDOROV, P.M.; SOBOLOV, S.I.; KHEYFETS, V.L.; TSEYNER, V.M.;  
SHAKHNAZAROV, A.K.; SHEYN, Ya.P.; SHERMET'YEV, S.D.; SHERMAN, B.P.;  
SHISHKIN, N.N.; SHLOPOV, A.P.

Georgii Ivanovich Blinov. TSvet.met. 28 no.6:62 N-D '55.  
(MIRA 10:11)  
(Blinov, Georgii Ivanovich, 1911-1955)

SHERMAN, B. P.  
18 27 18 4E2C  
✓ Pilot-plant smelting of nickel oxide ores with enriched blast. L. K. Petrov, I. D. Reznik, V. I. Serpov, L. L. Cherniak, and B. P. Sherman. *Tsvetnye Met.* 29, No. 8, 33-5 (1958).—The blast fed to an exptl. shaft furnace smelting Ni ores was enriched to 25.7% O<sub>2</sub>. The typical charge was ore, coke, and gypsum. The rate of coke charge necessary for operation was decreased from 38% to 22.4% by use of the enriched blast. In addn. it was possible to increase the smelting rate from 28 tons/sq. m. of hearth to 34 tons/sq. m. Ni content of the mat also increased during the period when O was used. R. W. Guard.

REZNIK, I.D.; SHERMAN, B.P.; SOKIN, B.G.

Starting the operation of a KT-100 oxygen plant in the  
Southern Urals Nickel Combine. TSvet. met. 29 no.10:34-  
38 0 '56.

(MLRA 9:12)

1. Gintsvetmet Kombinat Yuzhuralinkel'.  
(Ural Mountain region--Nickel--Metallurgy)  
(Oxygen)

SOV/136-59-7-6/20

AUTHORS: Reznik, I.D., Yevdokimenko, A.I., Zaberezhnyy, I.I.,  
Sherman, B.P., Kudrin, A.N., Serpov, V.I., Petrov, L.K.

TITLE: Shaft Smelting of Sintered Oxidized Nickel Ores With  
Hot Blast

PERIODICAL: Tsvetnyye metally, 1959, Nr 7, pp 30-36 (USSR)

ABSTRACT: The use of hot blast in shaft smelting in non-ferrous metallurgy is comparatively recent. The authors describe production experiments made by the kombinat (combine) 'Yuzhuralnikel' together with Gintsvetmet and Gipronikel'. Aside from the authors the following participated in the work. From 'Yuzhuralnikel': S. Ye. Lyumkis, M.M. Zolkina, A.G. Ushakov, V.T. Gritskova, U.D. Shaymukhambetov, N.V. Sukhin, I.S. Firiyago, V.I. Mannanikov; from Gintsvetmet: A.S. Buntovnikov, M.S. Kruglyakova, Yu. N. Skvortsov, L.I. Yevdokimova; from Gipronikel': N.P. Malyk, Ye. M. Simonov, N.N. Sin'ko, A.N. Derevnin. The furnace used had a cross section in the tuyere zone of  $7.2 \text{ m}^2$  and a width of 2m; stack height was 8 m and the slit tuyeres dipped at  $15^\circ$ .

Card 1/3

SOV/136-59-7-6/20

Shaft Smelting of Sintered Oxidized Nickel Ores With Hot Blast

Blast heating was provided by a specially designed oil-fired heater. Suitable instrumentation was provided. The experiments were conducted as during a previous investigation (Ref 4) on the same furnace; a parallel investigation of stack processes was carried out (Ref 5). Blast temperatures of 190, 300 and 400°C were used, the furnace working smoothly (Fig 1 shows the blast-pressure chart) and without difficulties. Compared with cold-blast operation on the same furnace a coke saving of 28.9% was obtained by blast heating to 300°C; allowing for the oil used in the blast heater the economy was 15.2% by weight, 11.5% if the difference in calorific value of oil and coke is taken into account. Fig 2 shows that top gas composition is best at 300°C. This temperature is also close to the optimum for fuel economy (Fig 3) and smelting and coke burning rates (Fig 4). The authors conclude that the tests have shown that blast heating should be introduced into practice. They recommend that oil- or gas-fired blast heaters should be designed, and that the development of methods for blast heating using the heat

Card 2/3

SOV/136-59-7-6/20

Shaft Smelting of Sintered Oxidized Nickel Ores With Hot Blast

contents of slags and top gases should be accelerated.  
There are 4 figures, 2 tables and 5 references, 4 of  
which are Soviet and 1 French.

ASSOCIATION: Gintsvetmet (I. D. Reznik, A. I. Yevdokimenko, I.I. Zaberezhnyy);  
Kombinat (Combine) Yuzhnikel' (B. P. Sherman, A. N. Kudrin,  
V. I. Serpov); Gipronikel' (L. K. Petrov)

Card 3/3



BOCHKAREV, L.M.; RAGULINA, A.T.; SERPOV, V.I.; CHERMAK, L.L.; SHERMAN, B.P.

Pilot plant testing of the smelting of oxidized nickel ores  
with a blow containing up to 45 percent oxygen. TSvet. met. 33  
no.7:23-28 J1 '60. (MIRA 13:7)  
(Nickel--Metallurgy) (Oxygen--Industrial applications)

S/194/61/000/012/010/097  
D209/D303

AUTHORS: Sevast'yanov, V. V., Likhterov, I. M., Petukhov, V. N.,  
Sherman, B. P., Fedotov, V. K. and Golovach, V. K.

TITLE: Introducing level-meters to nonferrous metallurgy  
plants

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika,  
no. 12, 1961, 31, abstract 12A229 (Radioakt. izotopy i  
yadern. izlucheniya v nar. kh-ve SSSR. V. 3, M., Gos-  
toptekhzdat, 1961, 162-164)

TEXT: Described is a high sensitivity positional level-meter (L)  
type  $\gamma\eta$ -1013 (URP-1013) for signalling attainment of the degree of  
separation between two substances of different densities without  
direct contact with the system under investigation. The separation  
is determined by recording the change of intensity of  $\gamma$ -radiation  
passing through the mixture. The instrument consists of a power  
unit, four radiation sources and four radiation receivers. Various  
installation methods of L are described, depending on the proper-

Card 1/2

Introducing level-meters ...

S/194/61/000/012/010/097  
D209/D303

ties of the mixture. Installation diagrams of L are given. The application of L to the bins of a crushing-agglomerating plant resulted in its automation. There are 2 figures. [Abstractor's note: Complete translation.]

Card 2/2

YEVDOKIMENKO, A.I.; ZABEREZHNYI, I.I.; RAFALOVICH, I.M.; REZNIK, I.D.;  
Prinimali uchastiye: SHERMAN, B.P.; KUDRIN, A.N.; GALITSKIY, L.M.;  
SERPOV, V.I.; VOROB'YEV, V.A.; STEPANOV, A.S.; RODIONOVA, N.M.;  
BUNTOVNIKOV, A.S.; YEVDOKIMOVA, L.Ye.

Air blast preheating for shaft furnaces. Tsvet. met. 33 no.10:12-  
20 0 '60. (MIRA 13:10)

1. Gosudarstvennyy institut po tsvetnym metallam (for Yevdokimenko,  
Zaberezhnyy, Rafalovich, Reznik, Rodionova, Buntovnikov, Yevdokimova).
2. Yuzhno-Ural'skiy nikel'nyy zavod (for Sherman, Kudrin, Galitskiy,  
Serpov, Vorob'yev, Stepanov).

(Air preheaters)

(Metallurgical furnaces--Equipment and supplies)

SHUMAN, I.

People of Kharkov in the lead. Kryl. rod. 16 no.11:11  
M '65. (MIRA 18:12)

SHERMAN, D.

Preventing accidents in parachuting. Kryl. rod. 13 no.10:22  
0 '62. (MIRA 15:10)

1. Nachal'nik meditsinskoy sluzhby Kiyevskogo aerokluba.

(Parachuting—Safety measures)

45641

247500

S/126/63/015/001/029/029  
E073/E151

AUTHORS: Iyubchenko, A.P., Sherman, D.G., and Kuz'minov, G.S.

TITLE: Effect of cerium content of iron on self-diffusion

LITERATURE: Fizika metallov i metallovedeniye, v.15, no.1, 1963, 158-160

TEXT: The authors have already shown that Ce additions of up to 0.5% have no effect on the ratio of the intercrystalline ( $D_{\text{Boun}}$ ) and transcrystalline ( $D_{\text{Body}}$ ) self-diffusion coefficients of Fe. f  
Further investigations were carried out on pure Armco iron, vacuum induction melted, into which Ce was added, and the ratio  $K_{\text{Fe}}$  which equals

$$d(D_{\text{Boun}} \times D_{\text{Body}}^{-1/2})$$

was determined using the isotope  $\text{Fe}_{59}$ . It was found that Ce additions of up to 0.52% had little effect on the self-diffusion ratio, and that at elevated temperatures the individual values for inter- and trans-crystalline diffusion were not greatly changed.

Card 1/3

Effect of cerium content of iron...

S/126/63/015/001/029/029  
E073/E151

Fluctuations of  $\pm 100\%$  in the value of  $K_{Fe}$  were obtained as Ce was increased from 0 to 0.52%, but the overall effect, discounting the fluctuations, appeared to be negligible. This is contrary to the findings of K.P. Bunin and Ya.M. Malinochka that the effect of spheroidisers was to equalise the inter- and trans-crystalline mobilities of the Fe atoms. The experimental and published results show that the effect of Ce, Mg, etc. on the graphite in cast iron is not related to the kinetics of self-diffusion and it is probable that the surface active properties of the spheroidiser are responsible for spheroidisation. The electron orbits of additions appear to influence the shape of the graphite particles, as is seen by comparing the electron structures of spheroidising agents (Li, Na, Mg, K, Ca, Sr, Ba, Ce) with those of de-spheroidising agents (Ti, Cu, Sb, Pb, Bi). Inconsistencies in the behaviour of added elements on the structure of the graphite appears to be due to changes in electron configuration caused by interaction with impurities in the iron. Spheroidisation can also be achieved by additions which ensure the required electron configuration when absorbed on the graphite.

(cont 2/3)



Effect of cerium content of iron ...

S/126/63/015/001/029/029  
E073/E151

There are 2 tables.

ORIGIN: Kharkovskiy zavod transportnogo mashinostroyeniya  
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SUBMITTED: April 10, 1962

Card 3/3

S/126/63/015/002/024/033  
E193/E385

AUTHORS: Lyubchenko, A.P., Sherman, D.G. and Udovikov, V.I.  
TITLE: The effect of small magnesium additions on the self-diffusion of iron

PERIODICAL: Fizika metallov i metallovedeniye, v. 15, no. 2, 1965, 295 - 297

TEXT: In continuation of earlier work (A.P. Lyubchenko et al - FMM, 1962, 14, 1; 1962, 14, 6), the present authors studied the nature of self-diffusion of iron modified with additions of magnesium in quantities (0.005 - 0.02%) usually used in the fabrication of high-strength, nodular cast irons. Similar experiments were also carried out on grey and magnesium-modified cast irons. The diffusion of iron was studied at 960 - 1 200 °C. Both the radiometric and outer radiographic methods were used. Conclusions: 1) the grain-boundary diffusion predominates in Mg-bearing iron at 900 - 1 200 °C. 2) The order of magnitude of the self-diffusion coefficient of iron is not affected by Mg additions - the same applying to diffusion of Fe in Mg-modified cast iron. 3) Mg acts as a grain-refining agent and slows down the rate of grain-growth  
Card 1/3

S/126/63/015/002/024/033  
E193/E383

The effect of ....

in Fe at 960 - 1 100 °C. This is demonstrated in a figure where the grain size ( $\mu$ ) is plotted against the annealing temperature (°C) of armco iron (top curve) and iron with 0.005, 0.14 and 0.02% Mg (lower curves, in this order); the graph has been constructed for specimens annealed for 20 hours. There are 1 figure and 1 table.

ASSOCIATION: Khar'kovskiy zavod transportnogo mashinostroyeniya  
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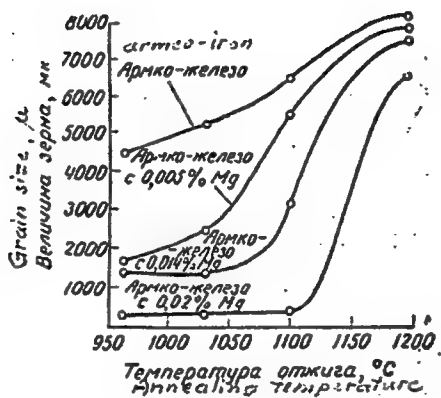
SUBMITTED: June 6, 1962 (initially)  
August 9, 1962 (after revision).

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The effect of ....

S/126/63/015/002/024/033  
E193/E383

Fig. 1:



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LYUBCHENKO, A.P.; SHERMAN, D.G.; TANANKO, I.A.

Modeling the process of cast iron modification on transparent  
crystals. Fiz. met. i metalloved. 16 no.3:378-384 S '63.

(MIRA 16:11)

1. Khar'kovskiy zavod transportnogo mashinostroyeniya imeni  
V.A.Malysheva.

LYUBCHENKO, A.P.; SHERMAN, D.G.

Absorptive character of changes in the aspect of ammonium chloride crystals under the effect of  $\text{NH}_4\text{Cl}$ . Fiz. met. i metalloved. 16 no.4:636 0 '63. (MIRA 16:12)

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VYGODSKIY, A.I.; NESTERENKO, V.G.; SHERMAN, D.G.

Mass spectrometric determination of hydrogen in metals. Zav.lab. 29  
no.12:1474-1475 '63. (MIRA 17:1)

1. Zavod transportnogo mashinostroyeniya.

LYUDCHENKO, A.P.; MOZHAROV, M.V.; SHEIDMAN, D.G.

Despheroidizing effect of bismuth on the graphite phase in  
cast iron. Fiz. met. i metalloved. 1/ no.6:853-861 Je '64.  
(RIR: 17:8)

1. Khar'kovskiy zavod transportnogo mashinostroyeniya imeni  
Malyshova.



1. The following information is being furnished to you for your information only. It is not to be used for any other purpose.

LYUBCHENKO, A.P.; SHERMAN, D.G.

Modeling with the use of transparent crystals the  
deglobularization process of the graphitic phase in  
cast iron. Fiz.-met. i metalloved. 20 no.5:712-718 " "  
'65. (MIRA 18:12)

1. Submitted October 10, 1964.

LYUBCHENKO, A.I., MITKAROV, M.V., SHERMAN, D.G., SOLOV'YEVA, Z.P.

Microdistribution of elements in cast iron altering the face  
out of graphite crystals. Fiz. met. i metalloved. 18 no.4 1964  
572 0 '64. (MIRA 1864)

1. Khar'kovskiy zavod transportnogo mashinostroyeniya imeni  
Malysheva.

LYUBCHENKO, A.P.; SHERMAN, D.G., MOZHAROV, M.V.

Character of the microdistribution of cerium in cast iron.

Lit. proizv. no.3:48 Mr '65.

(MIRA 18:6)